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(71) Applicant

Peter Fraser Phillips,  
114 Whitchurch Gardens, Edgware, Middx HA8 6PB

(72) Inventor

Peter Fraser Phillips

(74) Agent and/or Address for Service

P F Phillips,  
114 Whitchurch Gardens, Edgware, Middlesex HA8 6PB

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(58) Field of search

B7J

Selected US specifications from IPC sub-class B60R

(54) Sideways-viewing mirror assembly for vehicles

(57) A sideways-viewing mirror assembly comprising two mirrors (10) set approximately at right-angles to each other, and housed in a suitably rigid structure (11) that has fixings (12) to enable it to be attached to, or form part of, a vehicle.

The assembly is required to be attached to a vehicle, or be incorporated into the body of a vehicle during the latter's manufacture or modification, near to the front and/or rear extremities, so that each pair of mirrors faces towards the driver at such an angle that sideways views, approximately at right-angles to the direction of the vehicle, are afforded from the said extremities.

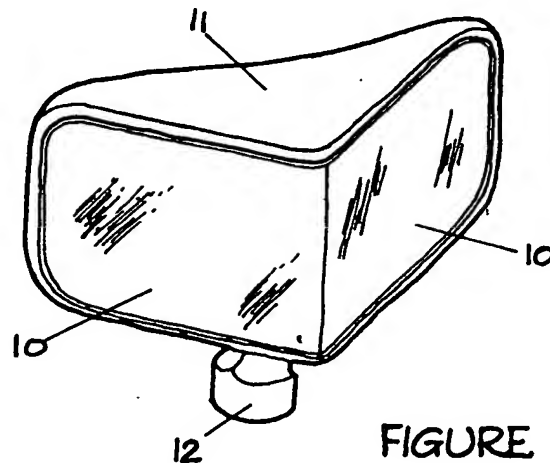


FIGURE 1

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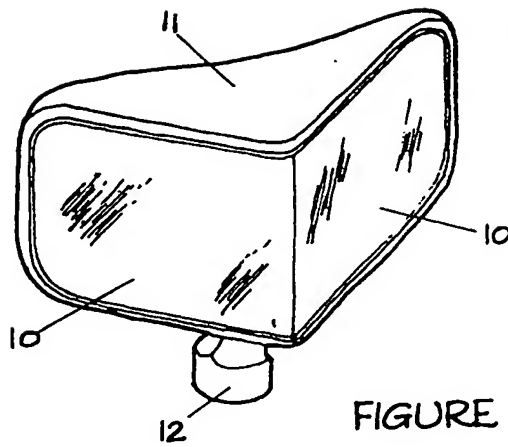


FIGURE 1

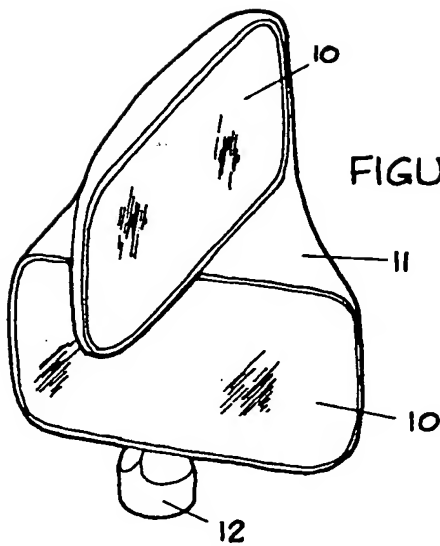


FIGURE 2

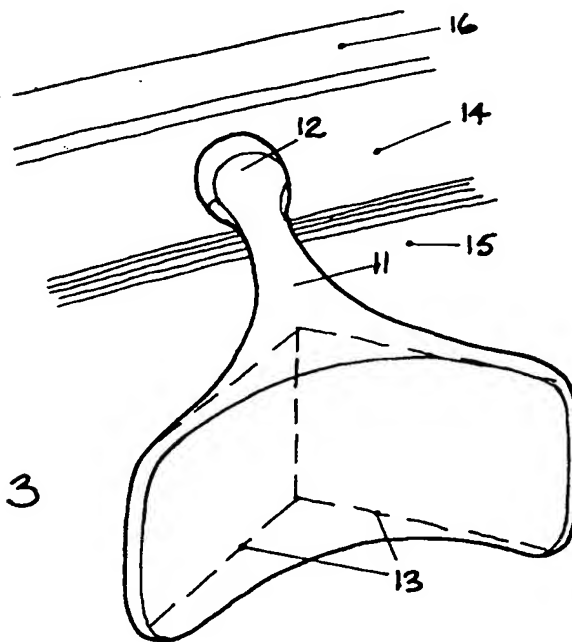


FIGURE 3

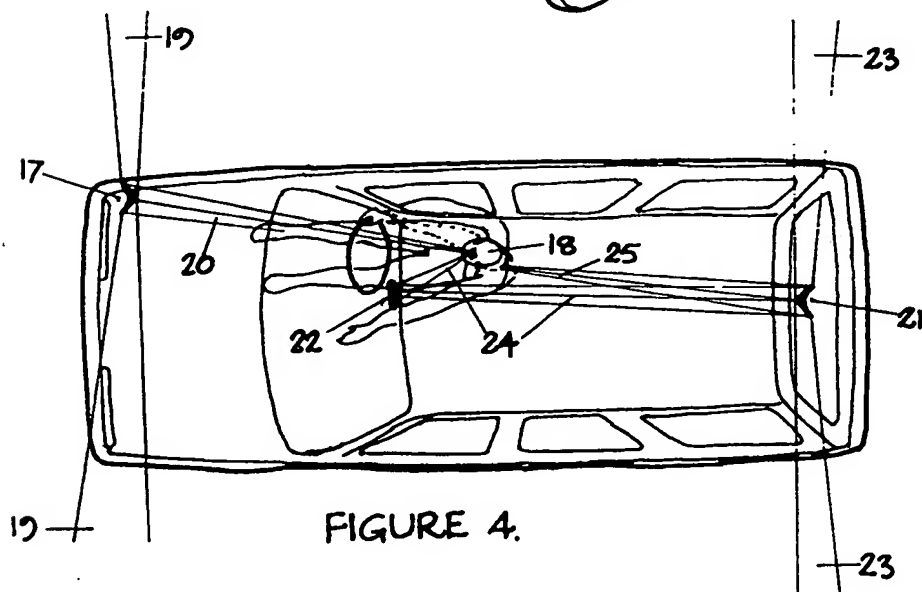


FIGURE 4.

## SPECIFICATION

## Sideways-viewing mirror assembly for vehicles

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This invention relates to a sideways-viewing mirror assembly for use with vehicles.

The difficulty for a driver to observe oncoming traffic when reversing or moving forward from an obscured junction or side access has often been overcome by the placing of one or more fixed mirrors, suitably angled and located at an appropriate position, near such junctions or side accesses.

Numerous junctions and accesses are not provided with such a facility however, and with the advent of increasing numbers of vehicles many junctions and accesses with ostensibly clear views are rendered obscure to varying degrees by parked cars, making exiting from such junctions and accesses hazardous.

According to this invention there is provided a sideways-viewing mirror assembly comprising two mirrors set approximately at right-angles to each other, and housed in a suitably rigid structure that has fixings to enable it to be attached to, or form part of, a vehicle.

The assembly is required to be attached to a vehicle or be incorporated into the body of a vehicle during the latter's manufacture or modification, near to the front and/or rear extremities, so that each pair of mirrors faces towards the driver at such an angle that sideways views, approximately at right-angles to the direction of the vehicle, are afforded from the said extremities.

Specific embodiments of the invention will now be described by way of examples with reference to the accompanying drawing, in which:

*Figure 1* shows in three-dimensional view, a mirror assembly suitable for mounting on the front wing of any vehicle or the rear wing of a saloon car.

*Figure 2* shows in three-dimensional view an alternative design of mirror assembly suitable for the same locations as *Fig. 1*.

*Figure 3* shows in three-dimensional view (as seen from the rear) a mirror assembly suitable for mounting on the upper part of the rear window of a vehicle, or hatchback door of a car.

*Figure 4* shows an example of a typical installation by means of a plan indicating the positions of sideways-viewing mirror assemblies, rear view mirror, driver, and vision paths for a hatchback car.

In *Figs. 1* and *2* the angled mirrors 10 are housed in a suitably rigid structure 11 with a fixing 12 with which to attach the assembly to a vehicle.

In *Fig. 3* the angled mirrors are shown in outline 13, housed in a suitably rigid structure 11, with a fixing 12 with which to attach the

assembly to the upper part of the rear window of a vehicle or hatchback door of a car 14. Part 15 shows the glass window in the window or hatchback door, and part 16 shows the roof of the vehicle body.

In *Fig. 4* the front sideways-viewing mirror assembly 17 enables the driver 18 to have reflected sideways views 19 from the front extremity of the vehicle via vision path 20.

The rear sideways-viewing mirror assembly 21 and rear-view mirror 22 enable the driver to have reflected sideways views 23 from the rear extremity of the car via vision path 24. Alternatively, rear reflected sideways views 23 can be achieved by direct vision path 25 from the driver to the rear sideways-viewing mirror assembly (which would be set at a slightly different angle to the indirect arrangement) by the driver turning his or her head round as is usually done when reversing.

Different arrangements of mirrors, but on the same principle, can be applied to different types, shapes and sizes of vehicles.

## 90 CLAIMS

1. A sideways-viewing mirror assembly comprising two mirrors set approximately at right-angles to each other, and housed in a suitably rigid structure that has fixings to enable it to be attached to, or form part of, a vehicle.

The assembly is required to be attached to a vehicle or shall be incorporated into the body of a vehicle during the latter's manufacture or modification, near to the front and/or rear extremities, so that each pair of mirrors faces towards the driver at such an angle that sideways views, approximately at right-angles to the direction of the vehicle, are afforded from the said extremities. The front sideways views are afforded via a direct vision path between the front assembly and the driver. The rear sideways views are afforded either via an indirect vision path between the rear mirror assembly, rear-view mirror and the driver, or a direct vision path between rear mirror assembly and the driver.

2. A sideways-viewing mirror as claimed in claim 1 wherein the leading edges of the mirrors (ie those nearest the driver) are kept apart by an area of non-reflecting material in order to separate the two images perceived by the driver.

3. A sideways-viewing mirror as claimed in claims 1 or 2 wherein the vertical and/or horizontal alignment of each mirror is separately adjustable.

4. A sideways-viewing mirror as claimed in claims 1 2 or 3 wherein the vertical and/or horizontal alignment of each mirror assembly is adjustable in relation to the body of the vehicle.

5. A sideways-viewing mirror as claimed in 1 2 3 or 4 wherein each mirror is a compound mirror of variable radii, or comprise

two or more mirror surfaces set at obtuse angles to each other to afford a wider angle of sideways view.

5 6. A sideways-viewing mirror as claimed in claims 1 2 3 4 or 5 wherein the mirror assembly is incorporated within the profile of a vehicle during the latter's manufacture or modification.

10 7. A sideways-viewing mirror substantially as described herein with reference to Figs. 1 to 4 of the accompanying drawing.

15 8. A sideways-viewing mirror as claimed in claims 1 to 7 but with alternative shapes of mirrors, mirror assemblies and/or arrangements for attaching the assemblies to vehicles to those shown in the accompanying drawing, in order to suit the special requirements of different types, shapes and sizes of vehicles.

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